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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,993	03/08/2002	Honary Hooman	42390P13490	2606

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EXAMINER	
TRUONG, CAMQUY	

ART UNIT	PAPER NUMBER
2195	

DATE MAILED: 02/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/683,993	HOOMAN ET AL.	
	Examiner	Art Unit	
	Camquy Truong	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-16,18-28 and 30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8-16,18-28 and 30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-6, 8-16, 18-28 and 30 are presented for examination. Claims 7, 17 and 29 have been cancelled.

2. It is noted that although the present application does contain line numbers in the specification and claims, the line numbers in the claims do not correspond to the preferred format. The preferred format is to number each line of every claim, with each claim beginning with line 1. For ease of reference by both the examiner and Applicant all future correspondence should include the recommended line numbering.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-6, 10-14, 18-20, 23-26 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miro (U.S. Patent 5,220,653) in view of Raza (U.S. Patent 6,816, 494 B1), and further in view of Collins et al (U.S. 6,791,990 B1). 8-9, 15-16, 21-22, 27-28

5. As to claims 1, 11, 19 and 24, Miro teaches the invention substantially as claimed including a device comprising:

a task scheduler coupled to the port, the task scheduler to generate a task identifier for every data frame received (col.13, lines 60-65);

a first queue coupled to the task scheduler to hold task identifiers of a first priority type (col. 4, lines 50-60; col. 13, line 66 – col. 14, line 9);

a second queue couple to the task scheduler to hold task identifiers of a second priority type, the second priority type different than the first priority type (col. 4, lines 60-65; col. 13, line 66 – col. 14, line 9);

a service coupled to the first and second queues, the service configured to retrieve task identifiers from the first queue and the second queue in a fair manner (col. 3, lines 50-61; col. 7, lines 56-67; col. 14, lines 10-22); and

a third queue (service queue, col. 3, line 50) coupled to the switch, the third queue to hold a plurality of task identifiers (col. 4, lines 20-25) placed in the third queue by the switch and provide the task identifiers to a processing unit in the order task identifier were placed in the third queue by the service (col. 3, lines 50-53; col. 4, lines 20-25; col. 7, lines 56-65; col. 13, lines 15-21; col. 14, lines 10-12).

6. Miro does not explicitly teach a port to receive one or more data streams, each data stream including one or more data frames and wherein the task router is configured to monitor the first queue for an overflow condition and, it an overflow condition is detected, reassign data frame priority types from the fist priority type to the

second priority type to prevent overflow of the first queue. However, Raza teaches a port to receive one or more data streams, each data stream including one or more data frames (col. 1, lines 44-51), and wherein the task router is configured to monitor the first queue for an overflow condition and, it an overflow condition is detected, reassign data frame priority types from the fist priority type to the second priority type to prevent overflow of the first queue (col.10, lines 21-30).

7. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Miro and Raza because Raza's one or more data streams, each data stream including one or more data frames, and the task router is configured to monitor the first queue for an overflow condition and, it an overflow condition is detected, reassign data frame priority types from the fist priority type to the second priority type to prevent overflow of the first queue would increase the flexibility and speed of Miro's system to eliminate data flow bottlenecks or congestion.

8. Miro, and Raza do not explicitly teach the switch is couple to the first and second queue. However, Collins teaches switch is couple to the first and second queue (col. 2, lines 1-6, lines 48-53, and lines 54-64).

9. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Miro, Raza and Collins because Collins's switch is couple to the first and second queue would improve the efficiency of

Miro and Raza' system by having a switching couple to the queues to provide more efficiency for controlling congestion or data flow bottlenecks methods.

10. As to claim 2, Miro teaches a classifier communicatively coupled to the port to assign one of plurality of priority types to every data frame received, the plurality of priority types including the first priority type and the second priority type (col. 3, lines 37-44; col.5, lines 11-22; col. 13, lines 60-65).

11. As to claim 3, Collins teaches a look-up table communicatively coupled to the task scheduler and to the port, the look-up table to provide one of the first priority type and the second priority type to the task scheduler for every data frame received according to the data stream in which the data frame was included (col. 2, lines 24-42).

12. As to claim 4, Collins teaches wherein one of the first priority type and the second priority type is pre-assigned to the data stream (col. 1, lines 38-45).

13. As to claim 5, Raza teaches the conversions between priority types and data frame types are dynamically configured in response to usage of the first and second queues (col. 10, lines 20-30).

14. As to claim 6, Miro teaches a task router coupled to receive task identifiers from the task scheduler and the task identifiers in either the first or second queue (col. 14,

lines 10-13).

15. As to claim 10, Miro teaches the third queue is a shared execution queue from which one or more processing units retrieve task identifiers to process (col. 1, lines 42-45).

16. As to claims 12, 20 and 25, Miro teaches the task priority level is determined from one of frame size, echo canceller tail length, codec type, and frame processing requirements (col. 2, lines 1-11).

17. As to claim 13, it is rejected for the same reason as claim 4.

18. As to claims 14 and 26, Miro teaches each storage queue stores data frames of a different task priority level than other storage queues (col.4, lines 55-65; col. 13, lines 6-14).

19. As to claims 18, 23 and 30, Miro teaches placing a plurality of the retrieved data frames into an execution queue to be processed (col. 1, lines 42-45; col. 3, lines 50-53; col. 4, lines 20-25; col. 14, lines 10-12).

20. Claims 8-9, 15-16, 21-22, 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miro (U.S. Patent 5,220,653) in view of Raza (U.S. Patent 6,816, 494

B1), further in view of Collins et al (U.S. 6,791,990 B1), and further in view of Rhee et al (U.S. patent 6,341,303 B1).

21. As to claims 8-9, Miro, Raza and Collins do not explicitly teach the switch is configured to retrieve task identifiers from both the first and second queues in a task retrieval cycle in which at least one task identifier is retrieved form each of the first and second queues such that spaces in the third queue is allotted equally according to processing time restriction. However, Rhee teaches retrieve task identifiers from both the first and second queues in a task retrieval cycle in which at least one task identifier is retrieved form each of the first and second queues such that spaces in the third queue is allotted equally according to processing time restriction (col. 2, lines 1-18).

22. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Miro, Raza, Collins and Rhee because Rhee's retrieve task identifiers from both the first and second queues in a task retrieval cycle in which at least one task identifier is retrieved form each of the first and second queues such that spaces in the third queue is allotted equally according to processing time restriction would improve the efficiency in retrieving task by processing equal time between tasks.

23. As to claims 15, 21 and 27, Rhee teaches each data frame type corresponds to a particular processing time requirement for data frames of the data frame type (col. 2, lines 1-18).

24. As to claims 16, 22 and 28, Rhee teaches according to the weighted processing scheme, data frames of approximately equal total processing time restrictions are retrieved from each storage queue in a task retrieval cycle (col. 8, lines 17-31).

Conclusion

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Camquy Truong whose telephone number is (571) 272-3773. The examiner can normally be reached on 8AM – 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3756.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR of Public PAIP. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIP system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

MENG-AI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER